

1. **Goncharenko E., Alyabev I., Trapeznikov A., Ogorodov D.** The Technology for Production of Shaped Castings from Technological Sealed Alloy AL4MS.

Was developed cuprous silumin AL4MS with scandium, which has optimal values of mechanical properties of the existing copper silumins. Shows the possibility of application of the alloy AL4MS for casting parts by using method LGM and strength analysis of the housing lifts to improve the accuracy blanks, reduce machining allowances. The economic efficiency of the technologies of applications alloy AL4MS is shown with the use of 3D models, cavityless casting methods and with the use of printed forms.

**Key words:** aluminum castings, 3D models, single mold, cavityless casting, strength calculation

2. **Voronin Yu., Matokhina A., Sikorsky E., Rogudeev A.** Information platform of fast identification of the reasons of emergence and ways of elimination of light gas sinks.

The maintenance of the new automated Information Platform system on providing factory founders and students of universities visual and logical system of improvement of quality of castings is considered.

**Key words:** Defects of castings, steel, cast iron, form, core, litnikov system, the visual and logical approach

3. **Goundobin N., Titov V., Orlov G., Phelkin A.** Developed reference materials of composition of solid of heat resisting the nickel alloys casting for spectral analysis a composition of Ni-Cr-Al-Co-Mo-Nb-W-Ti-V.

Developed and certified reference materials of (RM) of heat resisting nickel alloys casting for spectral analysis a composition of Ni-Cr-Al-Co-Mo-Nb-W-Ti-V in accordance with the standards of RF. Based on the results of studies of the chemical composition of the RM executed a certificate on standard samples of alloys category RMC (RM of corporation) with instructions for their use.

**Key words:** standard samples of the chemical composition, spectral and chemical analysis of alloys, the mass fraction of elements

4. **Farisov R., Ioffe M., Hajrullin M.** The combined technology of the manufacturing of applied and decorative fabricated metal products.

For the manufacturing of applied and decorative fabricated metal products is offered the combined technology with the use of iron and steel elements. Application of the combined technology allows improve functional, environmental, resourcesaving quality indicators of products.

**Key words:** applied and decorative fabricated metal products, combined technology, cast iron and steel elements, cast iron chips.

5. **Mamin V.** Synthesis of designs of foundry machines and units of automatic transfer lines.

The purpose present works boats to generalize such designs with the purpose of creation of programs automated designing. Decomposition of the most complex on structure of mechanisms is lead. It is offered to use as tops the column errors of details, and edges the column interfaces of these circuits.

**Key words:** basic details, a matrix of a contiguity, angular dimensional circuits, errors of manufacturing.

6. **K. Batichev A. Smolkin, A. Batichev, T. Chramko.** Training of the employees of industries FOUNDRY AND MODERN METHODS OF TESTING.

In article the essence of computer testing of students on disciplines of foundry production is nalyzed. Test tasks of "new generation" are offered: with several correct answers; without alternative answers (an open form); on compliance and on the correct sequence. Concrete examples are given and the technique of creation and maintenance of test tasks at the automated testing on this discipline is stated.

**Key words:** orm of a test task, control of the knowledge, the automated test control.

7. **Shalevskaya I.** Principles of computer networks building for remote environmental monitoring of foundry.

The problems of building an integrated computer network for remote environmental monitoring of foundry processes using sensors and object systems of monitoring network are discussed in this article. Ways to organize the networks for monitoring data collection and its transfer, processing, visualization are shown.

**Key words:** environmental monitoring of foundry, wireless monitoring network object systems, points of information retrieval, subscriber system.

8. **V. Ammer, A. Chechin, R. Kalinin.** Filter effect in the gating system LVM on processes in power solidifying metal.

The influence of ceramic foam filter on shrinkage defects formation in castings during investment casting is studied using computer modeling methods. It is shown, that the presence of filter in gating system during investment casting improves filtration feeding of solidifying metal and helps to eliminate shrinkage defects in the castings.

**Key words:** computer simulation, solidification of metal, LVM, ceramic foam filters.

9. **Slugina I.** Technical renovation of "LMZ "MashStal" ltd.

Complex modernization of enterprise will allow to provide high quality of products, which meets modern requirements. Technical renovation will create the conditions for production of new types of castings for oil and gas sector, and will provide significant increase of production volume for power valves market.

**Key words:** complex modernization, technical renovation, casting for oil and gas sector.